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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,510	09/13/2004	Kelly M Aubart	P51325	1144

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EXAMINER

STOCKTON, LAURA LYNNE

ART UNIT PAPER NUMBER

1626

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/507,510

Applicant(s)

AUBART ET AL.

Examiner

Laura L. Stockton, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 27, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claims 4-11 are pending in the application.

Rejections made in the previous Office Action that do not appear below have been overcome by Applicants' amendments to the claims. Therefore, arguments pertaining to these rejections will not be addressed.

Priority

The Provisional application 60/364,423 filed March 13, 2002 was reviewed because of intervening art. It was found that Applicants' provisional application did not support compounds in which the A variable represents $-C(O)NHOH$. Therefore, compounds where A represents $-C(O)NHOH$ are not afforded the benefit of the filing date of the provisional application but can only rely on the filing date of the International Application which is March 12, 2003.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 4-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

No persuasive support can be found in the specification or the originally filed claims for R2 representing "phenyl" in claims 4 and 5; R3 representing "H" in claims 4 and 5; Ar' representing "biphenyl" and "1-benzo[b]thiophenyl" in claims 4 and 5; and compositions comprising "excipients" in claims 9

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and 11. Applicants state that support can be found for the additional substituents in Examples 4, 7, 9 and 10 on page 4. However, a single species is seldom, if ever, sufficient to support a generic claim. In re Langer, 183 USPQ 288 (CCPA 1974). Further, pages 12-13 teach compositions having "carriers" but not "excipients". Therefore, the claims lack written description as such.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an

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application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 4 is rejected under 35 U.S.C. 102(a) as being anticipated by:

a) Harris et al. {Acta Crystallographica, Section D : Biological Crystallography (December 2002), D58, (12), pages 2153-2156} - see Compound (c) in Figure 2 on page 2155; or

b) Chong et al. {WO 2002/28829} - see compound 311 on page 68.

Each of the above cited references disclose a compound that is used by the instant claimed invention. Therefore, each reference anticipates the instant claimed invention.

Response to Arguments

Applicant's arguments filed July 27, 2006 have been fully considered but they are not persuasive.

Applicant argues that, in the case of Harris et al.,

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the instant invention does not encompass Compound (c) because instant R2 does not contain the substituent N-methyl-3-phenylpropanamide. In response, instant the R2 can represent $C_{1-3}alkylC(O)NR_3R_4$ wherein the alkyl (per the instant specification on page 3, lines 29-31) can be substituted.

Applicant argues that, in the case of Chong et al., the instant invention does not encompass Compound 311 on page 68 of Chong et al. because instant R2 does not contain the substituent $C_{1-4}alkylC(O)NR_3R_4$ where R3 and R4 are taken together with the nitrogen which they are attached to form a heterocyclic ring. In response, instant the R2 can represent C_1-C_9alkyl wherein the alkyl (per the instant specification on page 3, lines 29-31) can be substituted. Therefore, a group such as $C_{1-4}alkylC(O)NR_3R_4$ where R3 and R4 are taken together with the nitrogen which they are attached to form a heterocyclic ring is embraced by the instant claimed invention.

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Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by:

a) Jacobsen {U.S. Pat. 5,712,300} - see, for instance, Example 1 on page 20; or

b) Jacobsen {WO 97/32846} - see, for example, Example 23 on page 63.

Each of the above cited references disclose at least one compound that is used for the instant claimed invention. Therefore, each reference anticipates the instant claimed invention.

Response to Arguments

Applicant's arguments filed July 27, 2006 have been fully considered but they are not persuasive.

Applicant argues that the compounds of Jacobsen '300 do not treat bacterial infections. In response, Jacobsen '300 (column 18, lines 3-11) and Jacobsen '846 (page 25, lines 1-7) each teach that the disclosed compounds can treat diseases such as periodontitis and

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gingivitis, which are caused by bacterial infections.

See Fenesy, The Mount Sinai Journal of Medicine, Vol.

65, Nos. 5&6, pages 362-369, October/November 1998.

Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. {U.S. Pat. 6,825,215}.

Chen et al. disclose, for example, the compound in column 11, lines 47-49, that is useful for treating, for example, gingivitis (column 12, line 30) which is embraced by the instant claimed invention directed to treating a bacterial infection since gingivitis is caused by a bacterial infection.

Response to Arguments

Applicant's arguments filed July 27, 2006 have been fully considered but they are not persuasive.

Applicant argues that the compound in column 11, lines 47-49 of Chen et al. contains a sulfonyl moiety in the

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same position as the R1 substituent of Applicant's formula (I) but the R1 substituent does not contain a sulfonyl group. In response, instant the R1 variable in claim 4 can represent C₁-C₉alkyl wherein the alkyl (per the instant specification on page 3, lines 29-31) can be substituted. Therefore, the compound in column 11, lines 47-49 is embraced by the instant claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen {U.S. Pat. 5,712,300}, Jacobsen {WO 97/32846}, Chen et al. {U.S. Pat.

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6,825,215} and Duan {U.S. Pat. 6,495,548}, each taken alone or in combination with each other when similar utilities are asserted.

Determination of the scope and content of the prior art (MPEP

§2141.01)

Applicants claim imidazolone and pyrrolone compounds. Jacobsen '300 (columns 2-5; column 18, lines 3-18; and especially Example 1 on page 20), Jacobsen '846 (pages 1-7; and especially Example 23 on page 63), Chen et al. (columns 4-6; column 12; and especially the compound in column 11, lines 47-49) and Duan (columns 4-6; column 13; column 49, lines 29-45; columns 53-54; and especially the compound BB2 in column 46 wherein R¹⁰ is Example 1 found in column 47, line 52) each teach compounds that are either structurally the same as (see above 102 rejections) or structurally similar to the instant claimed compounds.

Ascertainment of the difference between the prior art and the claims

(MPEP §2141.02)

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The difference between some of the compounds of the prior art and the compounds instantly claimed is that some of the instant claimed compounds are generically described in the prior art.

***Finding of prima facie obviousness--rational and motivation (MPEP
§2142-2413)***

The indiscriminate selection of "some" among "many" is *prima facie* obvious, In re Lemin, 141 USPQ 814 (1964).

The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g. an anti-bacterial).

One skilled in the art would thus be motivated to prepare products embraced by the prior art to arrive at the instant claimed products with the expectation of obtaining additional beneficial products which would be useful in treating, for example, bacterial infections. Since each of the prior art teach similar compounds to each other and are used to treat some of the same

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ailments (i.e., treating gingivitis), the combination of the prior art references would also teach the instant claimed invention. The instant claimed invention would have been suggested and therefore, obvious to one skilled in the art. A strong case of *prima facie* obviousness has been established.

Response to Arguments

Applicant's arguments filed July 27, 2006 have been fully considered but they are not persuasive.

Applicant argues that neither Jacobsen '300 or Jacobsen '846 teach the compounds of instant claims 5-7. In response, Applicant is correct, neither Jacobsen '300 nor Jacobsen '846 teach the compounds of instant claims 5-7.

Applicant argues that nothing in either Jacobsen '300 or Jacobsen '846 suggest that the compounds disclosed therein would be useful in treating bacterial

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infections as found in instant claims 4 and 8. In response, and as stated above, In response, Jacobsen '300 (column 18, lines 3-11) and Jacobsen '846 (page 25, lines 1-7) each teach that the disclosed compounds can treat diseases such as periodontitis and gingivitis, which are caused by bacterial infections. See Fenesy, The Mount Sinai Journal of Medicine, Vol. 65, Nos. 5&6, pages 362-369, October/November 1998.

Applicant argues that the instant claimed invention is unobvious in view of Chen et al. since Chen et al. teach a large genus of carbocyclic and heterocyclic compounds. Applicant also argues that the compounds of Chen et al. are structurally distinct from those disclosed in Chen et al. since the compounds of Chen et al. contain a sulfonyl moiety in the same position as the R1 substituent of Applicant's formula (I).

In response, although Chen et al. teach a broad genus of compounds, Chen et al. teach compounds that are structurally the same as or structurally similar to

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the compounds of the instant claimed invention.

Further, and as stated above, instant the R1 variable in claim 4 can represent C₁-C₉alkyl wherein the alkyl (per the instant specification on page 3, lines 29-31) can be substituted. Therefore, the compound in column 11, lines 47-49 is embraced by the instant claimed invention. For all the reasons given above, the instant claimed invention would have been suggested to one skilled in the art and therefore, would have been obvious to one skilled in the art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the

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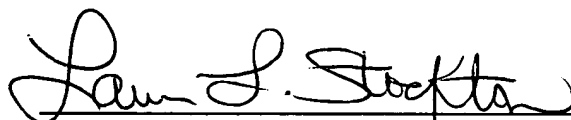
mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura L. Stockton whose telephone number is (571) 272-0710. The examiner can normally be reached on Monday-Friday from 6:15 am to 2:45 pm. If the examiner is out of the Office, the examiner's supervisor, Joseph McKane, can be reached on (571) 272-0699.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

The Official fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

A handwritten signature in black ink, reading "Laura L. Stockton". The signature is fluid and cursive, with the first name "Laura" and last name "Stockton" clearly distinguishable.

Laura L. Stockton, Ph.D.
Patent Examiner
Art Unit 1626, Group 1620
Technology Center 1600

October 11, 2006